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The characteristics, identification, motivation, guidance and administrative provisions of talented students are presented. Gifted children are characterized by the early development of self-criticism, independence and initiative in thinking, and in the ability to see relationships, to make associations, to adapt principles to concrete situations, and to observe and remember details.

A research study by Getzels and Jackson on the identification of the gifted states that creativity appears to lie in the ability to produce new forms, to conjoin elements that are customarily thought of as independent or dissimilar, not merely the ability for seeing the bizarre, but rather the aptitude for achieving new meanings having social value.

In the area of motivation, a study by Pierce and Bowman shows that high achieving girls aim their ambition towards either college or marriage. Since marriage is more desirable and a socially accepted goal, girls often choose this course and transfer their achievement drive to marrying an achiever.

In guidance of the gifted, provisions should be based upon individual needs, records of student progress, and the development of a positive self-concept. Administrative provisions include acceleration, ability grouping, and enrichment.

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STS

SUPERIOR AND TALENTED STUDENT PROJECT

A RESUMÉ OF SELECTED RESEARCH ON SUPERIOR AND TALENTED HIGH SCHOOL STUDENTS

by June Sochen

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PROJECT ON THE GUIDANCE AND MOTIVATION OF SUPERIOR AND TALENTED STUDENTS

. . . a project designed to assist secondary schools in identifying superior and talented students, in providing guidance services for them, and in encouraging them to make appropriate educational and occupational choices.

THE STS PROJECT is sponsored by the North Central Association of Colleges and Secondary Schools with the cooperation of the Southern Association of Colleges and Secondary Schools, the New England Association of Colleges and Secondary Schools, the Northwest Association of Secondary and Higher Schools, and the Western College Association and California Association of Secondary School Administrators.

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A RESUMÉ OF SELECTED RESEARCH ON SUPERIOR AND TALENTED HIGH SCHOOL STUDENTS

by June Sochen
Staff Writer for the STS Project

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This resumé is designed to aid school personnel, who are interested in establishing or improving programs for superior and talented students (STS), in becoming acquainted with certain relevant research. It should be useful to teachers, counselors, and administrators in either pre-service or in-service training programs.

Price 50c

Characteristics of the Superior and Talented Student

What are superior and talented students like? Do they differ greatly from children of average intelligence? Are they hunched-backed, bespectacled, and withdrawn? Since the 1920's, a considerable amount of research has been done in an attempt to answer these questions. Lewis M. Terman, Leta Hollingworth, and Paul Witty are among the earliest and foremost researchers in this field.

Terman's study, initiated in 1921, sampled over 1500 children in the top one percent of the population, ranging in age from 3 to 19 and in IQ from 140 to 200. As one of the earliest, most comprehensive studies of "gifted" students, it did much to destroy many of the erroneous images concerning the gifted child. Terman's[1] findings indicated that these children were, on the whole, healthier than children of average intelligence, better adjusted, academically superior to other groups in school, and more involved in a variety of out-of-school interests. Eighty-one percent of his sample came from homes where the fathers were professionals, semi-professionals, or businessmen. Negro children, Mexican children, and children of immigrant parents were represented, but the sample was composed primarily of children from "old American stock."

Terman and Oden stated in 1947 that the factors most often reported by parents, when describing superior intelligence in their children, included quick understanding, curiosity, extensive information, retentive memory, large vocabulary, and unusual interest in such phenomena as number relations, and such materials as atlases and encyclopedias.[2] Leta Hollingworth, a contemporary of Terman, studied gifted children

NOTE: All numbers in the body of the text material in this monograph refer to footnotes listed at the end of each section.

CHARACTERISTCS

in New York City and found that a very early interest and abiiity in reading are signs of superior intelligence.[3] She also stated that, in the opinion of their teachers, pupils selected as bright were more inquisitive, more imaginative, and more courteous than the average child.[4] Terman,[5] Hollingworth,[6] Sheldon,[7] and Strodtbeck[8] all found an unusually high proportion of Jewish children among their samples.

Paul Witty's work during the last thirty years has supported many of the findings of Terman and Hollingworth. Sixty-four percent of the gifted children in one of Witty's early studies (1930) came from business homes and thirty-four percent from professional homes. Witty found that "The physical status and general growth of the group are undoubtedly above average. Typically, the gifted child is not a physical weakling. He is somewhat above normal in his physical development when compared with unselected children of the same chronological age. He approaches the normal for the average child more closely in physical traits and motor ability than in mental ability."[9]

Recent research in this field has supported most of the earlier findings. Walter Barbe, in a study of 456 graduates of the Major Work Program in Cleveland, Ohio identified as gifted, found that (a) Negroes constituted 2.6% and Jews 39% of the group; (b) almost one-half the subjects had a foreign-born parent or parents; (c) they were usually the first born in a family of two; (d) 40% of the parents were in the professional and managerial class, 22.5% in clerical and sales, and 30% in the laboring group.[10] Herbert Carroll's findings indicated that "gifted children are characterized by early development of self-criticism, initiative and independence in thinking, ability to see relationships, make associations, adapt principles to concrete situations, and observe and remember details." He also stated that the gifted child is superior in such traits as desire to know, desire to excel, originality, and power to learn.[11]

A similar list of intellectual abilities of the gifted is given by Goodhart and Schmidt. They stated that the gifted have (1) great curiosity, (2) wide range of divergent interests, (3) a large, fluid vocabulary, (4) good memory, (5) the ability to generalize, (6) the ability to interpret and recognize relations, (7) the ability to use economy in work methods, and (8) a strong sense of responsibility.[12]

Research findings in the 1950's thus support, as a whole, the findings of the 1920's. There have been, however, a few notable exceptions to these general conclusions. Elizabeth Drews' study of 150 gifted high school students in Lansing, Michigan, showed a deviation from the past

studies in terms of the parental background and socio-economic status of the students identified as having above average intelligence. Twenty-five percent of the students in Drews' study came from homes of skilled, unskilled, and low white collar workers. The professional class (about 10% of the Lansing population) still contributed more than their share of gifted children, but the lower socio-economic groups were more equitably represented.[13] Another study, conducted by Bonsall and Steffire,[14] discovered that when superior students were compared to average students in personality traits, the superior students demonstrated more thoughtfulness, emotional stability, and restraint; whereas a socio-economic breakdown (superior students from a high socio-economic level were compared with average intelligence youngsters from the same level) revealed the fact that there were no significant differences in personality traits.

Another deviation from past research studies concerns the reading habits of superior students. Terman's study showed that a large number of his "gifted" would read, voluntarily, many and more difficult books than their peers. Recent findings made by Willard Abraham and Steve Kirshner, however, demonstrated a superficiality of reading tastes among the bright students; although they liked to read, they did not bother with more difficult books than those read by average students. Kirshner also found that, although bright students were very articulate, their thinking was superficial and they lacked the ability to perceive subtle relationships or to probe ideas in depth.[15]

Terman and Oden concluded in their follow-up report (1947) that: "We now know that in physique and general health, children of high IQ are on the average superior to the general child population . . . but we do not yet know how much of this is to be credited to superiority of home environment."[16] Regardless of the factor under study, one can be certain that descriptions of the characteristics of superior and talented students must be considered in terms of the population defined—whether it is Terman's top one percent or the STS Project's upper twenty-five percent.

FOOTNOTES

[1] Lewis M. Terman, "Mental and Physical Traits of One Thousand Gifted Children," *Genetic Studies of Genius,* Vol. 1 (Stanford, California: Stanford University Press, 1947).

[2] Lewis M. Terman and Melita H. Oden, "The Gifted Child Grows Up," *Genetic Studies of Genius,* Vol. 4 (Stanford, California: Stanford University Press, 1947), p. 25.

[3] Leta S. Hollingworth, *Gifted Children, Their Nature and Nurture* (New York: The Macmillan Company, 1929), p. 139.

[4] *Ibid.*, p. 122.

[5] Terman, *op. cit.*, p. 296.

[6] Hollingworth is referring to children with over 180 IQ in this instance.

[7] Paul M. Sheldon, "The Families of Highly Gifted Children," *Marriage and Family Living*, Vol. 16, February, 1954, pp. 59–60.

[8] Fred L. Strodtbeck, "Family Interaction, Values and Achievement," in David C. McClelland, *et. al.* eds., *Talent and Society: New Perspectives in the Identification of Talent* (Princeton, New Jersey: D. Van Nostrand Company, Inc., 1958), pp. 135–191.

[9] Paul Witty, "A Study of 100 Gifted Children," *Bulletin of Education*, University of Kansas, Vol. 2, No. 7, February, 1930, p. 38.

[10] Walter B. Barbe, "A Study of the Family Background of the Gifted," *Journal of Educational Psychology*, Vol. 47, May, 1956, pp. 302–9.

[11] This material was quoted from a summary of Herbert Carroll's study which was reported in *Educational Administration and Supervision*, Vol. 41, No. 4, April, 1955, p. 211.

[12] Goodhart and Schmidt, *op. cit.*, p. 211.

[13] Elizabeth Monroe Drews, "A Four-Year Study of 150 Gifted Adolescents," A report presented to the American Psychological Association, December, 1957 (mimeographed).

[14] Marcella Bonsall and B. Stefflre, "The Temperament of Gifted Children," as reported in James J. Gallagher, *Analysis of Research on the Education of Gifted Children*, State of Illinois (Springfield: Office of the Superintendent of Public Instruction. 1960), pp. 56–7.

[15] Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), p. 43.

[16] Terman and Oden, *op. cit.*, p. 377.

II.

Identification of the Superior and Talented Student

What educational tools should be utilized to identify superior and talented students? Which instruments are the most reliable and valid? Research studies have been conducted at the elementary, junior high, and high school levels to determine which instruments, either objective or subjective, are most effective in identifying superior students.

The findings indicate that no one instrument can be considered infallible in the identification of all superior students. Some tools seem to be more useful than others. A combination of group intelligence scores and group achievement scores, for example, has been found by Pegnato and Birch to be an effective screening device.[1] This study, conducted in a junior high school in Pittsburgh, Pennsylvania, found, however, that teacher judgment identified less than half of the students identified by other instruments; moreover, almost a third of the students chosen by the teachers as bright belonged in the average intelligence range on the Stanford Binet rather than in the gifted or superior intelligence range.[2]

Pegnato and Birch noted a measurable gap between individual intelligence test scores and group intelligence test scores. It was discovered, for example, that if a cut-off point of 125 IQ was based on a group intelligence test, more than one-half of the gifted students were missed. Indeed, one student whose IQ was 115 when based on a group test, had an IQ of 149 when scored on an individual test. A study, conducted by Martinson and Lessinger,[3] also demonstrated a lack of equivalence between scores on group intelligence tests and scores on individual intelligence tests. Because of the low ceilings on certain group tests, significant discrepancies were found. The different ceilings of these tests must thus be taken into account in interpreting the results. If, however, objective

instruments, such as group intelligence tests, are recognized for their limitations as well as their strengths and are used in conjunction with other evidence, they are effective instruments.

Early Identification. In California's program for gifted students on the kindergarten level, Martinson and Lessinger found that screening on the basis of multiple criteria was effective in nearly 50% of the cases. The group testing in this study was checked by administering individual tests.[4] The Hunter College Elementary School conducted an identification program for their first graders based upon specific mental abilities, and this study also seems to indicate that able students can be identified at an early age.[5]

Creativity. J. P. Guilford, in his structural analyses of the intellect, as well as his analyses of creative abilities, has done pioneer work in this field.[6] Resulting from his research findings, he has developed creativity tests which differentiate the various creative qualities. Recent research studies, most notably Getzels and Jackson's study,[7] have attempted to differentiate the highly creative student from the highly intelligent student. In this study, the subjects were selected from an adolescent population in a midwestern, private, secondary school. Utilizing a standard intelligence test and five creativity tests, (including Guilford's tests) it was possible for them to identify a group of individuals who were in the top twenty percent of the total sample on IQ measures, but who were not in the top twenty percent on measures of creativity; it was also possible for them to identify a second group of individuals who ranked in the top twenty percent on creativity, but who were not in the top twenty percent on IQ. There was a mean difference of 23 IQ points between the two groups. Both groups were found to be equally superior to the total population in school performance as measured by standarized achievement tests. Among the many interesting findings, the authors concluded that "the essence of creativity appears to lie in the ability to produce new forms, to conjoin elements that are customarily thought of as independent or dissimilar; not merely the propensity for seeing the bizarre, but rather the aptitude for achieving new meanings having social values."[8] Torrance, attempting to discover the specific creative traits of superior students, constructed his own tests of creativity. His findings, on the whole, confirmed Getzels and Jackson's conclusions.[9]

Specific Abilities. How do we identify a potential scientist? How do we discover artistic talents? Research studies have determined that

identification of certain special talents and abilities can be reasonably well accomplished by some of the same methods utilized in identifying general intelligence. *High intelligence accompanies many specific talents.* For example, the potential scientist or mathematician is, very likely, an individual with high verbal ability (the chief factor measured on our standardized ability tests), with a high ability for mathematical reasoning, and a high reading ability.[10] These characteristics may be determined through the general tests of mental ability; further, the potential scientist can be observed in the classroom by the teacher as one of the most perceptive students and one of the quickest to grasp abstract concepts and to see subtle relationships.[11]

While abilities such as mechanical aptitude can be measured with a fair degree of accuracy by a number of procedures, certain other talents, such as art and music, are much more difficult to identify. William Poland states that musical talents still remain unspecified despite the number of music tests that are in existence. "By the time a child reaches the age at which relatively stable predictions are possible, the innate and the learned are so completely confounded that the only feasible solution to the problem of finding the musically talented—a problem in prediction —appears to be a longitudinal study of success and failure in music." [12] He goes on to say that because of the differences in atmosphere, curriculum, and aims of the major music schools in college, there is no way to establish national norms predicting success in music.

Although probable success in music cannot be predicted, Poland advocates developing the conditions Sidney Pressey suggests as favorable to talent growth. Among these conditions are: a prevalent cultural interest in the field, encouragement to use and develop the talent as early as possible, and the stimulation of many successes for which the individual gains recognition.[13] During a workshop in educating the gifted child, a committee studying "Identification of the Gifted" agreed with Poland's position.[14] Harold Seashore, who has done a great deal of research in this field, asserts that "the Seashore tests and a few others which have been reasonably well standardized can only help us predict who probably will not go far in music because of sensory limitations; they will not permit the conclusion that high scorers are certain to succeed if they try."[15]

Robert Iglehart reports that the most recent and comprehensive study of testing techniques in art produced negligible results. "Talent is more complex than a factor such as mechanical aptitude (for which there are

successful instruments of identification) and more specific than general intelligence." [16]

Because creative activities such as art and music require a synthesis of many unrelated elements, it is difficult to assess or identify them. Ability to develop new forms or relationships out of old ones and to perceive previously unknown elements are characteristics of the musically or artistically talented.

A Broad Base. Recognizing the weaknesses of existing instruments, those concerned with identifying STS should avoid too narrow a concept of such individuals. Dael Wolfle makes a case for a more intensive cultivation of diversity and the cultivation of special abilities.[17] The purpose of identification is to recognize individual differences and to make adequate provisions for educating individuals in terms of these differences.

FOOTNOTES

[1] Jack W. Birch and Carl W. Pegnato, "Locating Gifted Children in Junior High School: A Comparison of Methods," *Exceptional Children,* Vol. 25, 1959, pp. 300–04.

[2] *Ibid.,* p. 303.

[3] Ruth A. Martinson and Leon M. Lessinger, "Problems in the Identification of Intellectually Gifted Pupils," *Exceptional Children,* Vol. 26, January, 1960, pp. 227–31.

[4] *Ibid.,* pp. 228–29.

[5] Reported in Miriam Goldberg, "Research on the Gifted," Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960) p. 47.

[6] J. P. Guilford, "The Structure of Intellect," *Psychological Bulletin,* Vol. 53, 1956, pp. 267–93.

[7] Jacob W. Getzels and Philip W. Jackson, "The Study of Giftedness: A Multidimensional Approach," *The Gifted Student,* Cooperative Research Monograph No. 2 (Washington: U.S. Government Printing Office, 1960), pp. 1–18.

[8] *Ibid.,* p. 10.

[9] Reported in Frank Barron, "Creativity: What Research Says About It," *NEA Journal,* March, 1961, pp. 18–19.

[10] Paul F. Brandwein, *The Gifted Student as Future Scientist* (New York: Harcourt, Brace and Company, 1955).

[11] Robert F. DeHaan and Jack Kough, *Identifying Students with Special Needs,* Teacher's Guidance Handbook, Vol. 1 (Chicago: SRA, 1956).

[12] William Poland, "Predicting Success in Music Study," in Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), pp. 115–122.

[13] *Ibid.,* p. 116.

[14] Isa Cole and Louis A. Fliegler, "Identification of the Gifted,"*Workshop in Educating the Gifted Child* (Syracuse: Bureau of School Service, May, 1959).

[15] *Ibid.,* p. 13.

[16] Robert Iglehart, "Identifying Art Talent," in Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), pp. 123–25.

[17] Dael Wolfle, "Diversity of Talent," *The American Psychologist,* August, 1960, pp. 535–45.

III.

Motivation of the Superior and Talented Student

How do you motivate underachieving students? What are the causes of underachievement? How do you transform underachievers into achievers? These are among the significant questions which have been considered by researchers in the field of motivation. In this section, the emphasis is primarily upon psychological and sociological studies on underachievement, and no attempt is made to discuss physiological factors such as a malfunctioning thyroid gland which may well affect a student's school work.

Many studies have been conducted on the *family's influence upon student achievement.* One characteristic that has been intensively studied to determine its relationship to achievement is early independence training. Rosen has found[1] that in groups where children are trained for early independence, the need for achievement is stronger than in other groups. McClelland substantiated the theory that early independence is conducive to the development of a high achievement motive.[2] Strodtbeck discovered that the power relationships that exist between parents and children affect the latter's attitude toward achievement[3]—this relationship, of course, is affected by the family's sub-cultural group and its social status.

Ryan and Layton studied underachievement in relation to the family structure. They found a positive correlation[4] between the disruption of the family structure and underachievement. The multiple factors involved in an act of divorce, for example, have grave and far reaching effects on the student. Another study found that, while high achieving children identify strongly with their achieving fathers and with the adult values of their parents, underachievers tend to view their fathers in particular, and their parents in general, in a much less significant way.[5]

It was also found that parents of underachievers tend to be dominant and autocratic.[6] A notable exception to this conclusion, however, was pointed out in a study by Drews and Teahan; it revealed that the mothers of the high achievers were more authoritarian than mothers of underachievers.[7] Bowman and Pierce found that the mothers of high achieving *boys* were democratic and encouraged verbalization in their children. The opposite was true of high achieving girls.[8] The researchers in this case suggest that boys thrive in a more democratic, open atmosphere, whereas girls achieve successfully in a more controlled setting.

Another family variable that has been studied is the educational level of the parents. Some researchers found that the parents of high achievers had more education that those of the low achieving group,[9] while other studies have found no differences in respect to education of parents and achievement of children.[10] In a study of comparative influences, Joseph Kahl discovered that the *attitude* of the parents toward academic achievement was much more important than the socio-economic status of the family. In a study of lower middle class families, high ability boys who had fathers with low educational aspirations usually shared these feelings and did not have the desire to attend college, whereas boys whose fathers had high academic ambitions usually passed these feelings on to their sons.[11] This study seemed to indicate that the parents' attitude toward education was a determining factor in the achievement of their children rather than the parents' educational accomplishments. This evidence corroborated Troops' study of variables determining college attendance from which he concluded that "The amount of money variable—which we have investigated as one of the 40 variables—is one of the least important of the considerations, while the attitudes of the child and his parents and the community are all important."[12]

The family's *actual behavior* in matters dealing with achievement is also crucial. In a study conducted by Nicholas Hobbs, it was discovered that parents of highly motivated students shared ideas with their children, participated in cultural activities with them, and planned family activities jointly. Further, there were more books and musical instruments in these homes. "The average number of books read in three months was ten for the high group, considerably more than the number read by the low achievers."[13] Terman, in the follow-up study of his original sampling, noted that the home environment of his able students was excellent, and a good number of books were available within the home.[14] The importance of the family as molder of ideas and attitudes

as well as determiner of future actions is well known. These studies substantiate, once again, the significant influence played by the family in determining highly motivated individuals.

Research has also been done in the area of academic and vocational *goals*. Goldberg found, in a study of underachievers at DeWitt Clinton High School in New York City, that there was a wide gap between an underachiever's perception of his present status and the image to which he aspired.[15] Armstrong noted that the group of underachievers he studied chose future occupations because of others' influences rather than their own interests.[16] Gowan found that his underachievers had no goals, or impossible ones, in meeting task demands in childhood.[17] Leslie Nason, in a study of six factors related to achievement,[18] noted that in the cases of the underachievers, one or more of the factors were missing. These factors were: (1) future educational plans of the pupils; (2) parent's level of academic expectation for the student; (3) personal adjustment scores of the individual; (4) future vocational plans (particularly for boys); (5) parental attitude toward future vocational plans of the student; (6) indication by the student of the presence of inspiration or a source of encouragement toward success. Further, Nason found that the lack of positive influences rather than the presence of negative ones seemed to characterize the environment of the underachievers.

Girls are often overlooked in a study of underachievement because of their conforming behavior in the classroom. It could be speculated, however, that many girls are underachievers—when this term is defined as selecting future goals which are not equal to their ability.

Some studies on this subject have been conducted. In an earlier mentioned study of Pierce and Bowman's,[19] it was noted that the high achieving girls came from homes where achievement was valued; and where the mothers were authoritarian and controlling. Further, after high school, the girl's high achievement goal tended to center around either college or marriage. Because marriage is a most desirable and socially accepted goal, the girl often chose this course and transferred her achievement drive to that of marrying an achiever. Eugene H. Stivers of Los Angeles State College, in a study on motivation for college in high school girls, reported that many high achieving, highly motivated girls in high school do not want to go on to college. These girls were highly motivated – not toward future education, however, but toward a job or marriage or both.[20]

A combination of positive forces are necessary in order to motivate

superior students toward academic achievement. As Nason indicates in his research conclusions, the absence of positive forces is more detrimental than the presence of negative forces. The external environment in which the superior student operates must be an environment in which talent development is respected and encouraged.

FOOTNOTES

[1] Bernard C. Rosen, "Race, Ethnicity, and the Achievement Syndrome," *American Sociological Review,* Vol. 24, No. 1, 1958, pp. 47–60.

[2] D. C. McClelland, ed., *The Achievement Motive* (New York: D. Appleton-Century-Crotts, Inc., 1953), pp. 275–318.

[3] Fred L. Strodtbeck, "Family Interaction, Values and Achievement," in David C. McCelland, *et al.* eds., *Talent and Society; New Perspectives in the Identification of Talent* (Princeton, New Jersey: D. Van Nostrand Company, Inc., 1958), pp. 146–8.

[4] Jane Beasley, *Underachievement: Review of Literature,* dittoed copy (1957), p. 13.

[5] This conclusion has been reported in the recent studies of Barbara Kimball, Paul Bowman, James Pierce, Fred Strodtbeck, and John Gowan.

[6] John C. Gowan, "Dynamics of the Underachievement of Gifted Students," *Exceptional Children,* Vol. 24, November, 1957, pp. 98–107.

[7] Elizabeth M. Drews and John E. Teahan, "Parental Attitudes and Academic Achievement." *Journal of Clinical Psychology,* Vol. 13, October, 1957, pp. 328–32.

[8] Paul H. Bowman and James V. Pierce, "Motivation Patterns of Superior High School Students," *The Gifted Student, Cooperative Research* (Washington: U.S. Government Printing Office, 1960), pp. 39–40.

[9] Hatchick, Pearlman, Terman, Regensbury, Granzow, and Roe as reported in Jane Beasley, *op. cit.,* p. 13.

[10] *Ibid.,* MaQuery and Blackman, p. 13.

[11] Joseph A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," *Harvard Educational Review,* Vol. 23, 1953, pp. 186–203.

[12] Herbert A. Toops, "The Prediction of College-Going," *School and Society,* Vol. 51, March, 1940, pp. 257–61.

[13] Nicholas Hobbs, "Motivation to High Achievement," as reported in Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), p. 257.

[14] Lewis M. Terman and Melita H. Oden, "The Gifted Child Grows Up," *Genetic Studies of Genius,* Vol. 4 (Stanford, California: Stanford University Press, 1947), pp. 15–18.

[15] Miriam Goldberg, "Research on the Gifted," in Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), pp. 41–66.

[16] A summary of Armstrong's findings can be found in Louis A. Fliegler and Charles E. Bish, "The Gifted and Talented," *Review of Educational Research,* Vol. 29, No. 5, December, 1959, p. 424.

[17] A summary of Gowan's findings can be found in Louis A. Fliegler and Charles E. Bish, *op. cit.,* p. 426.

[18] Leslie J. Nason, *Academic Achievement of Gifted High School Students* (Los Angeles, University of Southern California Press, 1958), p. 92.

[19] Bowman and Pierce, *op. cit.,* pp. 38–40.

[20] Eugene H. Stivers, "Motivation for College in High School Girls," *School Review,* Vol. 67, Autumn, 1959, p. 326.

IV.

Guidance for the Superior and Talented Student

What guidance services are effective for superior students? What special or different provisions, if any, have been developed for these students? These are typical of the questions asked, in terms of guidance, concerning the superior student. A great deal of material has been written about guidance for these students, but there has been little published research activity in this area.

Most of the material is based upon generalizations derived from a study of superior student characteristics. For example, Peters, reporting on Drews' findings, indicated that a significant characteristic of the superior student is his, or her, ability to view things in greater perspective than the student of average intelligence. The implication is that guidance provisions for superior students should be more "future-oriented" rather than "now-oriented."[1]

Rothney and Koopman, in an article entitled "Guidance of the Gifted," state that "Counseling of the gifted does not differ in nature from counseling of other students, but it does vary in its demands on the counselor."[2] The authors maintain that the variation in demands is based upon the advanced mental development of gifted students. In a questionnaire survey conducted by Endicott, it was noted that the two major problems facing superior high school students were "discovering special abilities" and determining "vocational choices."[3] These students were questioned in the latter part of their junior year in high school.

The superior students' readiness for self appraisal and self-conceptualization at higher levels and at earlier ages than other students[4] makes them ready for advanced guidance services earlier in the guidance program. Nason derived the following specific recommendations for counselors of superior students from his research findings on factors related to achievement.

1. "Special provisions should be based upon individual needs as determined by an analysis of the patterns of circumstances associated with them.
2. Records maintained for these students should include a record of the students' progress toward personal adjustment, social adjustment, future academic plans and vocational plans; also their concepts of parental attitudes toward their plans for the future.
3. Counselors should give more attention to the self-concept of superior students and to their own ideas as to their environment and future." [5]

John Gowan, utilizing material from his findings on underachievers, suggested the following techniques for dealing with underachieving superior students:

1. Determine the percent of underachievers in your school. If it runs much higher than 15%, there may be problems of morale, antisocial trends, or other factors in the school which should receive special attention.
2. Since gifted underachievers are usually boys, by a ratio of 2 to 1, make an effort to assign counselors who are most capable of reaching them: a male counselor may often be more effective than a female counselor.
3. Give attention to building up the gifted underachiever in the area in which he has a real chance of outstanding success, whether it be music, athletics, or an academic subject. The real and enduring interest of some strong adult model figure with whom the young person can easily relate should also be secured.
4. Attention should be given by the counselors to the anxieties which plague adolescent boys. Ignorance of sex, concern about a mediocre school record, how grades can be brought up to college standards, and anxiety for the rejecting teacher are acute problems facing the adolescent. The boy should know that the counselor has time for him and wants to help him.
5. Try to find membership roles for the gifted underachiever in group activities that would require student leadership. Help him develop social responsibility roles.
6. Group therapy should be used as it helps to establish an understanding peer group.[6]

Making the gifted student aware of his potentialities, preparing him for college, and counseling him on any emotional problem are general

goals of the guidance program for superior students.[7] Aiding the underachieving superior student in bridging the gap between his ability and his achievement, however, has become the single most crucial guidance problem. One research study, concerned with group counseling of the underachiever, was conducted by Ohlsen and Proff.[8] They worked intensively with 29 bright underachieving ninth graders in a therapeutic group counseling setting. Operating in a classroom equipped with remote controlled television equipment, the underachievers discussed their problems (many times through role playing) with an understanding counselor. Four trained observers watched, studied and analyzed the counseling sessions in another room where the closed circuit television screen was set up. The counseling sessions were held for one class period twice a week for sixteen weeks. The underachievers in this study were selected on the basis of discrepancies between grade point average and their score on a test of mental ability.

They concluded that within this group setting each client discovered "(1) that expressing his own real feelings about people, things, and ideas helped him to understand himself and the forces that disturbed him; (2) that at least one adult could accept him and that this adult, the counselor, wanted to understand him; (3) that his peers had problems too; (4) that, in spite of his faults, which his peers wanted to help him correct, his peers could accept him; (5) that he was capable of understanding, accepting, and helping others; and (6) that he could learn to trust others. When a client discovered that others accepted him, he found that he could better accept others, and eventually that he could better accept himself. After he began to accept himself, then, and only then, could he accept the fact that he was gifted, and make plans which required him to use his great potentialities. All of this takes time (and more than eight weeks)."[9]

The Talent Preservation Project, jointly conducted by the Engineering School of Columbia University and the New York City Public Schools, has been concerned (within both a research and action program), with providing professional services to underachievers following intensive, individual interviews. 4875 underachievers in the 39 cooperating New York City high schools are the subjects for this study. A case study of each individual was made, taking into account the student's background, previous grades, and test scores, followed by recommended action. Individual psychological examinations, psychiatric interviews, group therapy by psychiatric social workers, and counseling in the school are

among the professional services available. In the progress report issued at the close of the first year's activity, (November, 1958) it was noted that "inadequate motivation was a prime factor in poor achievement among superior individuals."[10] The individualized treatment has not, as yet, been conducive to the formation of generalizations.

The Superior and Talented Student Project, sponsored by the North Central Association of Colleges and Secondary Schools, was a research and action program, concerned with assisting secondary schools in identifying, guiding, and motivating their superior students. Over one hundred schools throughout the country participated in this program through the direction of regional accrediting associations. The primary concern was to create action on the part of local schools and their communities for their superior students. Numerous interviews with all STS members, and particularly identified underachievers, was one of the Project's requirements; through intensive counseling, it was hypothesized that these underachievers could become more aware of their abilities and make proper educational and occupational choices. A summary of the research results is to be published.

When planning a guidance program for superior students, the specific characteristics of the STS as well as an understanding of the societal pressures influencing these students must be taken into consideration. Then, identifying and grouping these students according to their innate ability and demonstrated performance can be accomplished, followed by the development of specific guidance activities.

FOOTNOTES

[1] Herman Peters, "Counseling Services for Talented High School Students," in Bruce Shertzer, ed., *Working With Superior Students: Theories and Practices* (Chicago: SRA, 1960), pp. 201–08.

[2] Norbert E. Koopman and John W. M. Rothney, "Guidance of the Gifted," in Nelson B. Henry, ed., *Education for the Gifted,* Part II (Chicago: National Society for the Study of Education, 1958) p. 348.

[3] Frank S. Endicott, *Guiding Superior and Talented High School Students,* (Minneapolis: Lund Press, 1961), p. 22.

[4] Koopman and Rothney, *op. cit.,* p. 348.

[5] Leslie J. Nason, *Academic Achievements of Gifted High School Students,* (Los Angeles: University of Southern California Press, 1958), p. 92.

[6] John C. Gowan, "The Underachieving Gifted Child, a Problem for Everyone," *Journal of Exceptional Children,* Vol. 21, April, 1955, p. 247.

[7] Nason, Rothney and Koopman, and Gowan all state one or more of these items as guidance goals.

[8] Merle M. Ohlsen and Fred C. Proff, "The Extent to which Group Counseling Improves the Academic and Personal Adjustment of Underachieving Gifted Adolescents," *Cooperative Research Project No. 623* (University of Illinois, 1960).

[9] *Ibid.,* p. 118.

[10] Talent Preservation Project, *Progress Report,* November 25, 1958 (mimeographed copy) pp. 3–4.

V.

Administrative Provisions for the Superior and Talented Student

What is the most effective administrative technique for working with superior students? What have researchers discovered about ability grouping? Considerable research has been conducted on the advantages and/or disadvantages of the three general administrative techniques: acceleration, homogeneous grouping, and enrichment within a heterogeneous classroom. Attempts have been made to develop settings in which the controlled variable is a specific administrative provision and some research studies have examined inter-relations among the three devices. Acceleration, for example, has been incorporated with both the enrichment and the grouping techniques.

Acceleration

The main questions asked in the research studies conducted with both accelerated groups and homogeneous groups were: How do these groups compare in terms of personal and social adjustment with comparable students in non-accelerated and heterogeneous groups? Do they learn more quantitatively and qualitatively? Do they get along with their peers? Do they have a distorted self image? In studies of acceleration and its relation to academic achievement, Justman, Keys and a number of other researchers [1] have noted in all of their studies that the accelerated group has done as well as or better than, the control group. Further, the students in the accelerated groups were socially well-adjusted as compared with the control groups. In a study at the elementary level in Evanston, Illinois, it was found that accelerated students are "significantly higher than other groups in educational quotient, indicating that they are using potential to good advantage." [2]

In an effort to determine the advantages of acceleration for superior students, Sidney L. Pressey conducted studies to determine the period

of an individual's life when he is most productive. Pressey found in one study that the most productive period of a bright individual's life is his twenties. In another study, in which a group of Amherst graduates was rated in terms of national recognition, the largest number of nationally known figures were individuals who had graduated from college at the age of nineteen.[3] Lehman also found that greater productivity is achieved during the twenties.[4] These researchers suggest that acceleration is desirable for the very bright student so that he can finish his formal training early and begin utilizing his talents and energies during his creative prime of life.

Physical and psychological development of the student must be considered before he or she is accelerated. Most of the research studies indicate, however, that if an STS is emotionally mature, acceleration may be desirable.

Ability Grouping

There is little evidence, either positive or negative, for homogeneous ability grouping. Schwartz studied the effects of special grouping on the scholastic achievement and personality development of students in four elementary schools and three junior high schools. He found that, although the programs in the schools differed, grouping improved the students' scholastic attainments, aided their personality development, and enabled the bright students to be more adequately challenged.[5] In Portland, Oregon, it was found that the bright student performed higher academically in a narrow range group.[6] Other studies have found superior academic achievement among students in high school honors classes or other special groups.[7]

The Community Consolidated Schools in Evanston, referred to earlier, have been experimenting with accelerated, partially segregated, and enriched classes. This experiment was initiated in 1956 to determine which technique was most effective. Students in the third grade were selected and identified according to their test scores on various group tests. Although no concrete results have yet been gathered, the latest report indicates that "It is clear that it is much more difficult to plan to meet the needs of the superior individual in a heterogeneous class where the range of ability can be very wide than in one in which all children are superior in ability and where less time needs to be spent in acquiring basic skills."[8] It is pointed out in this report of experiences at the elementary school level that ". . . the segregated and partially segregated groups have had the opportunity to carry on many outside projects

and have learned many special skills which are not measured by achievement tests." [9]

In an evaluation of a program in Dade County, Florida, gifted students stated that they felt more at home in special classes than in the regular classes.[10] In the Portland study, the teachers and students were pleased with the grouping arrangement [11] and one study has shown that the student's image of himself improves when he is in a group of his intellectual peers.[12] Researchers have also noted that the aspirational level of the average students is noticeably raised when the bright student is taken out of the class. The average student seems to feel that he can raise his sights and achieve at a higher level among his intellectual peers than he can when more capable students are in the class.[13]

Enrichment

In the elementary program in Evanston, enrichment through partial segregation and enrichment within the classroom are both being utilized to determine their effectiveness. Some of the activities engaged in by these groups are reported as follows:

> "The partially segregated groups have had two years of practice in conversational French, in the use of a typewriter, in writing reviews of new books for library use, and in acquiring research skills. Segregated group B wrote words and music to two operettas, made the scenery, and performed before the school assembly. Segregated group A conducted scientific experiments, using a microscope and writing reports which would have compared favorably with reports of high school students. They have had considerable practice in preparing materials and presenting reports orally to the group." [14]

While research in "enrichment studies" has been limited because of the difficulty in measuring the results, there have been some research studies conducted. In the field of mathematics, Long investigated the effectiveness of an enriched program in advanced algebra upon students in heterogeneous classes. The results showed that achievement was greater in the experimental group than in the control group.[15] Stokes studied the enrichment method for teaching algebra to superior ninth grade students and noted that the superior students in the experimental group developed a greater competency in general mathematics and achieved significantly higher algebra scores. No difference, however, was seen in the development of the students' understanding of mathematical concepts.[16] The research studies have not been able to fully

demonstrate that able students learn more in terms of depth in the enriched classrooms. In some cases, the enrichment provided is simply acceleration; for example, eighth graders studying algebra rather than general mathematics. In the social studies field, Parker established a two hour eleventh grade enriched class in U.S. History and American literature. The results indicated that the experimental group performed equally well with the control group in terms of academic achievement and social adjustment.[17] Additional descriptions of enriched curricular programs are abundant in the research.[18]

Research studies seem to indicate no inherent advantage or disadvantage to acceleration, ability grouping, or enrichment. The effectiveness of any or all of these administrative techniques seems to be dependent upon the curricular provisions and teaching methods utilized in working with superior and talented students.

FOOTNOTES

[1] Reported in Daniel C. Shannon, "What Research Says About Acceleration," *Phil Delta Kappan,* Vol. 22, November, 1957, pp. 70–3.

[2] Vera V. Miller, "Education of the Gifted," *American School Board Journal,* September, 1959, pp. 23–6.

[3] Shannon, *op. cit.,* pp. 72–3.

[4] H. C. Lehman, *Age and Achievement* (Princeton, New Jersey: Princeton University Press, 1953), pp. 324–31.

[5] Reported in A. Harry Passow, "Enrichment of Education for the Gifted," Nelson B. Henry, ed., *Education for the Gifted,* Part II (Chicago: National Society for the Study of Education, 1958), p. 209.

[6] Portland Public Schools, *A Report Summarizing Four Years of Progress by the Cooperative Program for Students of Exceptional Endowment,* (Portland, Oregon: Board of Education, 1957), p. 35.

[7] Reported in Passow, *op. cit.,* p. 210.

[8] Miller, *op. cit.,* p. 48.

[9] *Ibid.*

[10] Dade County Public Schools, "Teaching the Talented," (Miami, Florida, 1956, multilithed).

[11] Portland Public Schools, *op. cit.*

[12] *Talented Youth Project,* Horace Mann-Lincoln Institute of School Experimentation, Teachers College, Columbia University, New York City, Current Research Project (unpublished).

[13] *Ibid.*

[14] Miller, *op. cit.,* p. 25.

[15] The result of this doctoral study was reported in Louis A. Fliegler and Charles E. Bish, "The Gifted and Talented," *Review of Educational Research,* Vol. 29, No. 5, December, 1959, p. 433.

[16] *Ibid.,* p. 433.

[17] Clyde Parker, "A Measured Experiment with Mentally Advanced Children," *American School Board Journal,* Vol. 133, December, 1956, pp. 23–4.

[18] Joseph L. French, ed., *Educating the Gifted* (New York: Henry Holt and Company, 1959); has a number of articles which describe enriched programs. Jack Kough's *Practical Programs for the Gifted* (Chicago: Science Research Associates, 1960) also has a section on some enriched gifted children programs.

Publications of the Superior and Talented Student Project

Cues to Successful Study.
Edited by J Ned Bryan and Bruce Shertzer

Do Your Dreams Match Your Talents?
by Vance Packard

Guidelines for Parents of Capable Youth.
by Robert F. DeHaan

Guiding Superior and Talented High School Students.
by Frank S. Endicott

The School Provides for Superior Students.
Edited by June Sochen

Working with Superior Students: Theories and Practices.
Edited by Bruce Shertzer

A Resumé of Selected Research on Superior and Talented High School Students.
by June Sochen